

### REMARKS

The above amendments have been made voluntarily for the purpose of broadening the claims and not for the purpose of patentability. Therefore these amendments do not invoke *Festo Corp. v. Shodetsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3<sup>rd</sup> 558 (Fed. Cir. 2000) so as to prevent the application of the doctrine of equivalents.

The Examiner is respectfully requested to enter into the record the above amendments prior to calculating the filing fee for this continuation application.

Respectfully submitted,



---

David A. Rose  
Reg. No. 26,223  
Conley, Rose & Tayon, P.C.  
P. O. Box 3267  
Houston, Texas 77253-3267  
(713) 238-8000  
ATTORNEY FOR APPLICANT

## MARKED-UP VERSIONS OF AMENDMENTS

### In the Specification:

*The paragraph on page 1 under the heading "CROSS-REFERENCE TO RELATED APPLICATIONS"*

[The present application claims the benefit of 35 U.S.C. 119(b) provisional application Serial No. 60/063,326, filed October 27, 1999 and entitled "Drilling System", incorporated herein by reference.] This is a continuation application of U.S. Patent Application Serial No. 09/081,961, filed May 20, 1998 and entitled "Well System," which claims the benefit of 35 U.S.C. 119(e) of U.S. Provisional Application Serial No. 60/063,326, filed October 27, 1999 and entitled "Drilling System", both hereby incorporated herein by reference.

### In the Claims:

1. (Amended) A system for conveying a well apparatus in a well, comprising:  
a composite [umbilical] tube having a liner with a flow bore to circulate fluids and fibers wrapped in a predetermined pattern around said liner to carry axial load;  
a conductor disposed in the fibers; and  
a propulsion system attached downhole to said composite tube [umbilical].
2. (Amended) The system of claim 1 [further including a fluid] wherein said fluids around said composite [umbilical causing] tube cause said composite tube [umbilical] to achieve substantially neutral buoyancy within the well.
3. (Amended) The system of claim 1 wherein said composite [umbilical includes a] tube includes [with] an axial component of the modulus of elasticity having Young's modulus in the range of 500,000 to 10,500,000 psi.
7. (Amended) The system of claim 1 wherein said composite [umbilical includes a] tube [having] has a material with a density in the range of from 0.99 grams per cubic centimeter to 2.9 grams per cubic centimeter achieving substantially neutral buoyancy in said fluids.

10. (Amended) The system of claim 1 wherein said composite tube [umbilical] is made of a fiber reinforced matrix.
11. (Amended) The system of claim 1 [further including a metallic] wherein said conductor is embedded non-axially in [a wall of] said composite tube [umbilical].
12. (Amended) The system of claim 1 further including a data transmission conductor housed [within a wall] adjacent said fibers of said composite tube [umbilical].
13. (Amended) The system of claim 1 further including passages for conveying fluid pressure and conductors for conducting electricity and data, said passages and conductors being disposed adjacent said fibers.
15. (Amended) The system of claim 1 wherein said propulsion system includes an aperture therethrough extending around an axis of the propulsion system and from an upstream end to a downstream end for the flow of fluid through said propulsion system.
17. (Amended) An apparatus for performing operations downhole in a well comprising:
  - a string of tubular members each having a liner with a flow bore to circulate fluids with fibers wrapped in a predetermined pattern around said liner to carry axial load, said fibers forming [having] a wall [with] of non-metallic fibers; [and]
  - a bottom hole assembly attached downhole to said string; and
  - a power conductor disposed adjacent said fibers in said composite tube providing power to said bottom hole assembly.
18. (Amended) The apparatus of claim 17 wherein said bottom hole assembly includes a non-drilling well apparatus.
21. (Amended) A drilling system for drilling into a formation comprising:
  - a string of pipe having a portion thereof which is non-metallic with fibers wrapped in a predetermined pattern about a conduit adapted for the flow of fluids; [and]
  - a bottom hole assembly attached to one end of the string and having a propulsion system and a member for displacing formation;
  - said bottom hole assembly having a flow passage therethrough adapted for the flow of fluids and a return passageway external of said bottom hole assembly adapted for the flow of fluids containing cuttings; and

a power conductor disposed adjacent said fibers providing power to said bottom hole assembly.

22. (Amended) The system of claim 21 wherein said wrapped fibers form composite tubes and further including a connector for connecting lengths of said [pipe] composite tubes.

24. (Amended) The system of claim 21 further including a power section driven by fluids and providing power to said bottom hole assembly.

25. (Amended) The system of claim 21 wherein said [pipe is a] composite [pipe] tube has load-carrying layers of fiber.

33. (Amended) A system for drilling a borehole, comprising:

a string of composite pipe extending into the borehole, said composite pipe including fibers wrapped in a predetermined pattern to carry axial load;

a prime mover coupled to said pipe string;

a drill bit at one end for drilling the borehole;

said drill bit engaged to said prime mover;

a steerable assembly connected to said prime mover; and

said prime mover [adapted to move] pulling said composite pipe and forcing said drill bit [upstream or] downstream within the borehole [in response to said steerable assembly].

34. (Amended) A bottom hole assembly for controlling the drilling of a borehole from a control at the surface, comprising:

a composite pipe extending into the borehole;

said composite pipe [string] having a data transmission conduit coupled to the control;

a prime mover coupled to said pipe;

a drill stem attached to an orientation assembly and to a drill bit at one end for drilling the borehole;

said drill stem engaging said prime mover and said orientation assembly coupled to said data transmission conduit;

a steerable assembly connected to said prime mover and coupled to said data transmission conduit, said steerable assembly being in engagement with said drill stem;

said orientation assembly sending signals through said data transmission conduit to the control and said steerable assembly receiving signals from the control; [and]

said steerable assembly deflecting said drill stem in more than two directions to direct said drill bit three dimensionally without rotation;

said prime mover adapted to move said drill bit upstream or downstream within the borehole in response to said signals received by said steerable assembly.

35. (Amended) A bottom hole assembly for use in drilling a borehole, comprising:

a pipe attached at one end to the bottom hole assembly and having a communication link disposed in [extending through] a wall of the pipe;

a downhole motor;

a drill bit;

a propulsion system [thruster];

an articulated joint articulable three dimensionally [disposed in said thruster] and having a first portion connected to said downhole motor and a second portion coupled to said drill bit, said second portion connected to said first portion in a manner to permit said second portion to be bent three dimensionally from a coaxial orientation from said first portion; and

a steerable assembly in engagement with said second portion, said steerable assembly being in communication with said communication link to bend said second portion three dimensionally with respect to said first portion upon command to change the direction of said drill bit.